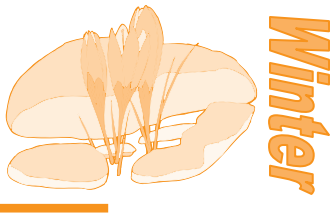
Lake County Soil and Water Conservation District

CrossSection

Volume XX, Issue 1
First Quarter 2011



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Tree Seedling Sale ends soon! Order forms available at

www.lakecountyohio.gov/soil

Urban Headwaters

Beth Landers, Coastal NPS Pollution Education Specialist

The river itself has no beginning or end. In its beginning, it is not yet the river; in the end it is no longer the river. What we call the headwaters is only a selection from among the innumerable sources which flow together to compose it. -T.S. Eliot

Every river begins somewhere – its headwaters. Even the largest of rivers starts as a network of small headwater streams, which are small enough to cross with a single step. They may not even have flowing water year-round. Yet at some place in each watershed, enough of these headwater streams have come together to form a river.

In a natural river system in northeast Ohio, these headwater streams are shaded by forests of maple and beech trees. These trees protect the waters from the heat of the sun and the influence of the wind. The roots stabilize the stream's banks and the leaves soften the impact of a driving rain. Headwater streams are also an important connection between surface water and groundwater. In wet times, streams take over their floodplains, and water is fed into the soil and rocks along the river corridor. This helps replenish groundwater resources, and decreases the amount of water that is carried on down through the river system. During drier periods, the groundwater is then fed back into the streams as their levels drop. This clear, cool water sustains not only the stream itself, but also the dozens of animal species that live in or near the stream. Insects, salamanders, and small fish live in these channels, and thrive on the cool, oxygen-rich waters.

As humans start altering a watershed, it is often the headwater streams that suffer the most. The trees are removed, exposing the streams to evaporation and solar heating. If the channel is not altered, the roots will decay and lose their ability to stabilize the stream banks. Often, however, small streams are moved for the convenience of property boundaries and to maximize the number of buildable sites. They are piped in culverts or directed into concrete channels, removing their connection to groundwater and their ability to sustain a population of aquatic organisms. Some are completely destroyed. Others remain in their original channels, but landowners cover the stream banks with riprap or sand or concrete bags, separating the stream channel from its floodplain.

When a watershed is developed, the houses and neighborhoods within the watershed become part of the headwater system. Rain that falls on a roof runs into the gutter, flows down the downspout, across the driveway, into the curb drain and into the nearest stream channel. Instead of headwater streams, the watershed now has headwater streets. These headwater streets can't filter contaminants, absorb any part of a high flow, and don't protect the downstream channel. They do provide contaminants and heat the water, especially in the summer as water flows across dark surfaces that have been exposed to the sun. The actions residents take (or fail to take) in their yards, driveways, garages and streets affect water quality throughout the Lake Erie watershed.

Lake SWCD Board Reorganizes

The Lake County Soil and Water Conservation District Board of Supervisors held their reorganizational meeting January 18th. Dick Baker has taken on the role of Chair and Billie Kamis transitioned to Vice Chair after four years as Chair. Dick has served on the Board in several capacities since 1997. Bruce Landeg and Skip Dugan will continue managing the budget process as Fiscal Agent and Treasurer, respectively. Jeff Hyrne, who was nominated to fill a vacant seat last summer, will fill the duties of Secretary. The Lake SWCD Board of Supervisors will undertake a strategic planning process this year to guide the District through the next five years and further into the future.

Changes In Local Erosion and Sediment Control Procedures

Julia Kokavec, Conservation Intern

A newly completed home with grass seed and straw mulch applied to the lot

In January, a notice was sent out to all Contractors and Homebuilders in Lake County about information regarding temporary and final stabilization requirements and Individual Lot Notice of Intent (NOI) Applications. This notice was sent to reiterate that the Ohio Environmental Protection Agency (OEPA) administers a permitting program designed to document construction activity in the state, and require practices that keep pollutants out of the streams (also referred to as Best Management Practices) as mandated in the Clean Water Act.

Temporary stabilization is used when any disturbed area of soil will remain idle for 21 days or longer. When this applies, seeding and straw mulch (or similar practices) must be applied to the disturbed area. Final stabilization is when all soil disturbing activities at the site are complete and a uniform perennial vegetative cover with a density of at least 80 percent cover for the area has been established. Final Grade Inspections (including temporary inspections) will not be approved until all Erosion and Sediment Control (ESC) practices on the approved site plan are in place. If these practices are not followed it prevents occupancy permits from being issued.

Local rules now require proof the a Notice of Intent (NOI) application has been completed. Coverage under a National Pollutant Discharge Elimination System (NPDES) construction general permit does not extend to the individual lots, unless the original owner/developer retains responsibility. Homebuilders must submit an NOI when building homes on lots purchased from a developer. Coverage does not extend to individual lots and the SWCD cannot (by law) issue approval letters without proof that an NOI has been submitted. All ESC applications must include a copy of the OEPA NOI Application but the Lake County SWCD does not need to wait for approval from the OEPA to process the application.

SWCD adapting programs to changing landscape

Dan Donaldson, District Administrator

Lake SWCD has upgraded two key positions at the District to better meet the changing needs on the landscape of Lake County. First, our Education Coordinator position has been upgraded to Coastal Non-Point Source Pollution Education Specialist. This program change puts our education efforts in context of being a coastal community on Lake Erie and ties nearly all of our programming to the water quality of Lake Erie. It also provides for consistency of programs across the counties that share the Lake Erie shoreline. Beth Landers will continue on in this position. This program change was made possible through a grant from Ohio's Office of Coastal Management.

Our second change is within our Agricultural Programs. Maurine Orndorff has accepted the new position of Watershed Coordinator for the Arcola Creek watershed. This was a natural progression for our agricultural programs as much of Lake County's agriculture is with the Arcola Creek Basin, including a large portion of our 95 million dollar nursery industry. Through this new position we will be able to bring all the communities in the watershed together to address land use and water quality/quantity issues and formalize a plan to ensure all stakeholders and land uses are represented. You'll be hearing much more about the Arcola Creek Watershed Action Plan in upcoming issues of CrosSection. This program was made possible through funding from the ODNR Division of Soil and Water Resources.

April Showers - Coming soon!

Beth Landers, Coastal NPS Pollution Education Specialist

After all the snow and ice this winter, it might be hard to believe that spring is coming. Yet in a few weeks we will be watching the skunk cabbage and sensitive fern pop up through damp spring soil. Now is the time to plan for runoff!

Any hard surface around your house can create runoff - from your roof to your driveway to your patio. If you collect this water and use it around your yard, you will help reduce the amount of water that flushes through a stream during a storm, and filter out some of the pollutants as well. You might even reduce your water utility bill in the summer.

Rain barrels are installed on downspouts around your house. They collect the rain that would otherwise empty into a storm drain (in older neighborhoods) or into a muddy spot in your yard (in newer houses). Up to 55 gallons of rainwater can be stored in a repurposed plastic food barrel from every April shower or July cloudburst. This water is free, and also free of utility water additives, such as chlorine and fluoride.

Rain gardens are landscape features that are designed to collect the rain water that reaches the end of your downspout or that flows off of your driveway or patio. A rain garden is installed a few inches below the level of the surrounding lawn and runoff is directed into it. The water is held in the garden for a day or so, and allowed to soak into the soil and be absorbed by the plants, or evaporate back into the air.

Water quality issues receive attention, but water quantity is also affected. Rain that falls onto compacted urban lawns, roofs, driveways, streets, and parking lots quickly drains to curb drains and ditches. This water soon hits small streams, causing them to rise quickly, and scour the cobbles and other sediment from the bottom of our stream channels. Watersheds that drain developed areas receive a larger volume of water more quickly, and are therefore more prone to flash flooding.

In undeveloped land, the rain lands on plants, evaporates off of leaves or soil surfaces, or soaks in slowly through small depressions and temporary wetlands throughout the landscape. Less water reaches stream channels, and it takes longer to get there. More water enters the groundwater table, where it can recharge streams during dry weather.

Lake SWCD collaborates with Lake Metroparks to provide rain barrel construction workshops. In 2010, Lake County residents made enough rain barrels at these workshops and other events to store over 11,000 gallons of water from each rainfall.

Workshops for 2011 are scheduled for April 2 at the Mentor Marsh Nature Center, April 20th through Lake Metroparks, April 21st at Holden Arboretum, and May 18th with Lake Metroparks. You can also call the Lake SWCD office to make arrangements to make a barrel anytime during business hours.

Common Questions about Rain Barrels

Are mosquitoes a problem?

Open-top or screened rain barrel systems can create mosquito-breeding sites. However, the system that Lake SWCD assembled is a closed system. The diverter connects to a hose barb, which allows water in, but keeps adult mosquitoes out. If you keep the caps in place, you will keep mosquitoes out.

How many barrels will I need?

You should estimate how much water you will be using in your garden. Each barrel holds 55 gallons, but depending on placement of the spigot and the hose barb, you will probably be able to use only 45-50 gallons from the barrel. Several barrels can be connected to the same downspout, or you can install a barrel on each downspout.

What about algae?

Since the barrels are opaque, there shouldn't be enough light for algae to grow. If you do develop an algae problem, try painting your barrel, and make an effort to use the water more quickly.

Can I drink the water?

There could be substances on your roof, in your downspout, or in the barrel that may not be good for you, so we recommend that the water collected in a rain barrel not be used for drinking by people or pets.

What if it gets full?

Since our systems are closed, there is no messy overflow to splash mud onto the barrel or your house. If the hose connecting the diverter to the barrel is full, rainwater will continue on down the downspout just like it did before you installed the barrel.

Am I allowed to have one?

You should check with your Homeowners Association and your local zoning administrator. However, since the system pictured above permits overflow to travel down the downspout, this is not a disconnection.

What if I don't like blue?

There are several products on the market for priming or painting plastic surfaces. You can choose a solid color to help your barrel blend in, paint your barrel to look like a shrub or wooden barrel or decorate it with bright, bold patterns. You can also wrap a wire trellis around the barrel and train a vine to it.

Lake County Soil & Water Conservation District
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Who Wants To Be a Conservationist?

Signs of spring edition! Are you tired of the snow and ice and eagerly awaiting the first brave crocuses? Check your knowledge of the native signs of spring below, then head out to look for them - spring might be just around the corner!

1) This is one of the earliest birds to give mating calls, often seeking out a partner in the snows of winter and sitting on eggs by February.

A) Northern Cardinal B) Great Horned Owl

C) Tufted Titmouse D) White-breasted Nuthatch

2) These small amphibians are the earliest to make themselves heard, often calling before the ice is completely gone from their breeding ponds.

A) Spotted Salamanders B) Spring Peepers

C) Wood Frogs D) American Toads

3) Spring is a bonanza of woodland wildflowers. However, one of the earliest of the spring wildflowers may go unnoticed, despite its ability to generate heat to thaw icy soils.

A) Snowdrop B) Colt's Foot

C) May Apple D) Skunk Cabbage

4) Those colorful phrases that your grandparents used such as "Plant your corn when the oak leaves are the size of a squirrel's ear" that relate natural phenomena to environmental conditions are examples of what branch of science?

A) Phenology B) Meteorology

C) Climatology D) Herpetology

Answers: 1) B, 2) C, 3) D, 4) A

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The public is invited to attend Lake SWCD's monthly Board meetings, held the fourth Tuesday of the month at 3:00 pm at 125 East Erie St., Painesville. Meeting announcements appear under the public agenda in the News-Herald and on the Lake SWCD website. Please call in advance to let us know you will be attending.